

## PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents  
United States Patent and Trademark  
Office  
Box PCT  
Washington, D.C.20231  
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

|   |   |
|---|---|
| Date of mailing (day/month/year)<br>10 October 2000 (10.10.00)            |   |
| International application No.<br>PCT/US00/04262                           | Applicant's or agent's file reference<br>17754-2-PC           |
| International filing date (day/month/year)<br>18 February 2000 (18.02.00) | Priority date (day/month/year)<br>19 February 1999 (19.02.99) |
| Applicant<br>REX, Gary, Charles   |   |

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:  
08 September 2000 (08.09.00)

☐ in a notice effecting later election filed with the International Bureau on:  
\_\_\_\_\_

2. The election ☒ was  
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Authorized officer

Zakaria EL KHODARY

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

|  |  |  |
|--|--|--|
| Applicant's or agent's file reference<br><b>17754-2-PC</b>                     | <b>FOR FURTHER ACTION</b> <small>see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.</small> |  |
| International application No.<br><b>PCT/US 00/ 04262</b>                       | International filing date (day/month/year)<br><b>18/02/2000</b>  | (Earliest) Priority Date (day/month/year)<br><b>19/02/1999</b> |
| Applicant<br><br><b>UNION CARBIDE CHEMICALS &amp; PLASTICS TECHNOLOGY CORP</b> |  |  |

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 2 sheets.  
☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :
- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of Invention is lacking** (see Box II).

4. With regard to the **title**,

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No. \_\_\_\_\_

- ☐ as suggested by the applicant.
- ☐ because the applicant failed to suggest a figure.
- ☐ because this figure better characterizes the invention.
- ☐ None of the figures.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/04262

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C08K3/04 C08L67/06

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C08K C08L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages                                   | Relevant to claim No. |
|------------|--|-----------------------|
| X          | EP 0 659 785 A (UNION CARBIDE CHEM<br>PLASTIC) 28 June 1995 (1995-06-28)<br>page 3, paragraph 2; table 2             | 1,5,6,<br>11,12,15    |
| P,X        | EP 0 949 633 A (DSM NV)<br>13 October 1999 (1999-10-13)<br>page 5 -page 6; examples                                  | 1,6,7,<br>11,14       |
| X          | DE 196 41 940 A (BASF AG)<br>16 April 1998 (1998-04-16)<br>column 2, paragraph 2<br>column 3, paragraph 2            | 1,6,15                |
| A          | EP 0 751 184 A (ATOHAAS HOLDING CV)<br>2 January 1997 (1997-01-02)<br>claims 1,11,12,18; examples; table 6<br>page 2 | 1,6,7,9,<br>10,12     |

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&amp;" document member of the same patent family

Date of the actual completion of the international search

23 May 2000

Date of mailing of the international search report

06/06/2000

Name and mailing address of the ISA

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Engel, S

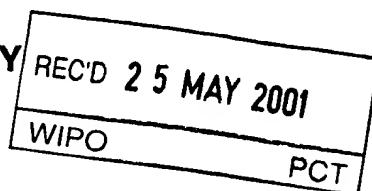
# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 00/04262

| Patent document<br>cited in search report |   | Publication<br>date |      | Patent family<br>member(s) |  | Publication<br>date |
|---|---|---------------------|------|----------------------------|--|---------------------|
| EP 0659785                                | A | 28-06-1995          | US   | 5401803 A                  |  | 28-03-1995          |
|   |   |                     | DE   | 69412985 D                 |  | 08-10-1998          |
|   |   |                     | DE   | 69412985 T                 |  | 11-03-1999          |
| <hr/>                                     |   |                     |      |                            |  |                     |
| EP 0949633                                | A | 13-10-1999          | EP   | 0947997 A                  |  | 06-10-1999          |
| <hr/>                                     |   |                     |      |                            |  |                     |
| DE 19641940                               | A | 16-04-1998          | NONE |                            |  |                     |
| <hr/>                                     |   |                     |      |                            |  |                     |
| EP 0751184                                | A | 02-01-1997          | FR   | 2736058 A                  |  | 03-01-1997          |
|   |   |                     | CA   | 2180282 A                  |  | 31-12-1996          |
|   |   |                     | CN   | 1176973 A                  |  | 25-03-1998          |
|   |   |                     | JP   | 9012903 A                  |  | 14-01-1997          |
|   |   |                     | US   | 5869557 A                  |  | 09-02-1999          |
| <hr/>                                     |   |                     |      |                            |  |                     |



## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

14

|  |   |  |
|--|---|--|
| Applicant's or agent's file reference<br>SJA/55971/000                                   | <b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) |  |
| International application No.<br>PCT/US00/04262  | International filing date (day/month/year)<br>18/02/2000  | Priority date (day/month/year)<br>19/02/1999 |
| International Patent Classification (IPC) or national classification and IPC<br>C08K3/04 |   |  |
| Applicant<br>UNION CARBIDE CHEMICALS & PLASTICS TECHNOLOGY CORP                          |   |  |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.


2. This REPORT consists of a total of 5 sheets, including this cover sheet.

- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☐ Certain observations on the international application

|   |   |
|---|---|
| Date of submission of the demand<br><br>08/09/2000  | Date of completion of this report<br><br>22.05.2001                       |
| Name and mailing address of the international preliminary examining authority:<br> European Patent Office<br>D-80298 Munich<br>Tel. +49 89 2399 - 0 Tx: 523656 epmu d<br>Fax: +49 89 2399 - 4465 | Authorized officer<br><br>Gordon, M<br><br>Telephone No. +49 89 2399 8299 |



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/US00/04262

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, pages:**

1-27 as originally filed

**Claims, No.:**

1-28 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).  
☐ the language of publication of the international application (under Rule 48.3(b)).  
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority in written form.  
☐ furnished subsequently to this Authority in computer readable form.  
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:  
☐ the claims, Nos.:  
☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/US00/04262

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

|                               |      |                   |
|-------------------------------|------|-------------------|
| Novelty (N)                   | Yes: | Claims            |
|                               | No:  | Claims 1,4,6,7,8  |
| Inventive step (IS)           | Yes: | Claims            |
|                               | No:  | Claims 2,3,5,9-28 |
| Industrial applicability (IA) | Yes: | Claims 1-28       |
|                               | No:  | Claims            |

**2. Citations and explanations**  
**see separate sheet**

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:  
**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/US00/04262

- 1). DE-A-196 41 940 discloses in column 3, line 40 (Rezeptur) a composition containing:
  - A solution of an unsaturated polyester in styrene (70 parts/68%)
  - A mixture of pMMA and a saturated polyester in styrene (15 parts/35%)
  - conductive carbon black (5.6 parts)
  - styrene (8 parts)
  - zinc stearate (3 parts)

This composition was used to produce a sheet and cured. The surface resistivity of the obtained sheet was  $10^5$  ohms.

The carbon black employed is stated to be in the form of agglomerates (column 2, line 24ff).

This disclosure anticipates the subject matter of claims 1,4,6,7 and 8.

- 2). EP-A-659 785 discloses the preparation of moulding compositions containing carbon black. Example 6 of table 2 discloses a composition containing an unsaturated polyester, poly-EVA, styrene, carbon black and zinc stearate. This disclosure anticipates the subject matter of claims 1,4 and 6.
- 3). EP-A-949 633 was published after the priority date of the present application. However under certain patent jurisdictions, this may nevertheless be relevant for novelty. It is therefore discussed in the present report.

This document discloses preparation of an unsaturated polyester composition containing as a component thereof a conductive paste based on a mixture of thermoplastics, styrene and conductive carbon black.

The examples teach combination of this paste with a blend of a styrenic solution of an unsaturated polyester, a styrenic solution of a saturated polyester, further additives including zinc stearate.

This disclosure is relevant (i.e. would in some cases to be novelty destroying) for claims. 1,4 and 6.
- 4). As regards inventive step it is apparent from the documents cited under (1) and (2) that it is conventional to incorporate a lubricant into a conductive composition. Hence the feature considered by the applicant to represent the inventive step of



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/US00/04262

the application is conventional and cannot support said inventive step.

Concerning the claims in detail:

- the features of the carbon black specified in claims 2 and 3 appear to be conventional and define any number of conductive carbon blacks. They are deemed to be formally novel only because there is no explicit disclosure of these in the art cited. There is no evidence that these features give rise to any technical effect. Hence the selection of these parameters is considered to be obvious.
- The molecular weight of the polymer specified in claims 5,11,12,13,17,24,26 and 28 represent conventional groups of polymers and have not been demonstrated to be associated with any technical effect.
- the coating of moulded articles is conventional and cannot support an inventive step (claims 9,10)
- Regarding claim 11, this relates effectively to the thermoplastic additive employed in claim 1. The matter of molecular weight has been dealt with above. The provision of a group of components of a mixture as a premixture is a conventional measure in polymer technology and the definition thereof cannot support an inventive step. this objection extends to claims 12-16. With regard to claim 14 it is noted that the lubricants defined are conventional in the art (cf zinc stearate is employed in the cited documents D1 and D2).
- The process steps defined in claims 17-23 are conventional.
- Concerning claims 24ff the comments above are valid.

- 4). Regarding clarity of the claims, it is noted that there is some unnecessary repetition and overlap.

Regarding claim 21, it is noted that the "feature" defined relates in fact to nothing more than reciting the function performed by the lubricant. This claim hence provides no definition of the subject matter of the application and is therefore superfluous.